

CLAIMS

What is claimed:

1. A method of automatically generating an IPv6 address using an E.164 telephone number, comprising:
 - a first step of reading in the telephone number of a telephone terminal;
 - a second step of converting respective decimal numbers constituting the telephone number of the telephone terminal into a 4-bit binary format;
 - a third step of padding a specific bit to the bit sequence converted in said second step to produce an interface ID having a pre-established size; and
 - a fourth step of combining said interface ID and the prefix information to produce an IP address.
2. The method of automatically generating an IPv6 address using an E.164 telephone number according to claim 1, wherein said first step reads in the telephone number of the telephone terminal in accordance with E.164 format.
3. The method of automatically generating an IPv6 address using an E.164 telephone number according to claim 2, wherein said telephone number of said telephone terminal comprises a country identification number, a local identification number and a subscriber telephone number.
4. The method of automatically generating an IPv6 address using an E.164 telephone number according to claim 1, wherein said fourth step combines the prefix information of 64 bit and the interface ID of 64 bit created using the E.164 telephone number to thereby produce an IPv6 unicast address.

5. The method of automatically generating an IPv6 address using an E.164 telephone number according to claim 4, wherein said third step pads 0 or 1 bit to upper or lower bit digits of said binary bit sequence to produce the interface ID of 64 bit.

6. A computer-readable recording medium having a program
5 embedded thereon for executing a method of automatically generating an IPv6 address using an E.164 telephone number, said method comprising:

10 a first step of reading in a telephone number of a telephone terminal;
a second step of converting respective decimal numbers constituting the telephone number of the telephone terminal into a 4-bit binary format;
a third step of padding a specific bit to the bit sequence converted in said second step to produce an interface ID having a pre-established size; and
a fourth step of combining said interface ID and the prefix information to produce an IP address.

7. A method of looking up an IP address corresponding to a telephone
15 number name address, comprising:

20 a first step of receiving a request for an IP address of said telephone number name address in a local domain DNS server;
a second step of receiving a server address which points to a corresponding country DNS server using a country identification number of said telephone number name address in a client node;
a third step of accessing a corresponding country DNS server recognized in said second step to recognize an address of a server for managing a corresponding local area DNS, using a local identification number of said telephone number name address; and
a fourth step of accessing a corresponding local area DNS server recognized in said third step to recognize an IP address of a corresponding subscriber's telephone number, using a subscriber's telephone number of said telephone number name address.

8. The method according to claim 7, wherein said fourth step
recognizes an address of a server for managing a corresponding prefix DNS using a prefix
identification number of said telephone number name address by accessing the
corresponding local area DNS server recognized in said third step, and recognizes an IP
5 address of said subscriber's telephone number by accessing said corresponding prefix DNS
server.

9. The method according to claim 7, wherein said first step adds a
country identification number to the telephone name number address, if said telephone
number name address includes only a local identification number and a subscriber's
10 telephone number, and then performing said second step.

10. The method according to claims 7, wherein said telephone number
name address is a telephone number of E.164 format.

11. The method according to claim 10, wherein a special character is
formed at the front of a telephone number of said E.164 format.

15 12. A computer-readable recording medium having a program written
thereon in a computer,

 said program executes a method of looking up an IP address using a
telephone number, comprising:

20 a first step of, if a request for an IP address of a telephone number name
address is received by a local domain DNS server, receiving a server address which points
to a corresponding country DNS server using a country identification number of said
telephone number name address in a client node;

25 a second step of accessing a corresponding country DNS server recognized
in said first step to recognize an address of a server for managing a corresponding local
area DNS, using a local identification number of said telephone number name address; and

a third step of accessing a corresponding local area DNS server recognized in said second step to recognize an IP address of a corresponding subscriber's telephone number, using a subscriber's telephone number of said telephone number name address.

13. A DNS server system for resolving an IP address for a telephone
5 number name address, comprising:

a root DNS server for managing country DNS server addresses corresponding to country identification numbers of said telephone number name address;

a country DNS server for managing local area DNS server addresses corresponding to local identification numbers of said telephone number name address;

10 a local domain DNS server for managing prefix DNS server addresses or IP addresses corresponding to prefix identification numbers of said telephone number name address; and

15 a subject DNS server for looking up an IP address corresponding to said telephone number name address to provide an address resolver in a client node with the IP address, through said root DNS server, a country DNS server, a local area DNS server and a local domain DNS server.

14. The DNS server system for resolving an IP address for a telephone
number name address according to claim 13, further comprising a prefix DNS server for
managing IP addresses corresponding to subscriber's telephone numbers of said telephone
20 number name address.